

## REMARKS

As an initial matter, Applicants reaffirm the election with traverse to prosecute the Group I method claims, *i.e.*, claims 1-32. Thus, claims 1-32 remain pending in the present application.

Claims 1-32 are rejected under 35 U.S.C. § 103(a) as being unpatentable over **Bukhman** (U.S. Patent No. 5,795,493) in view of **Bollinger** (U.S. Patent No. 5,375,064).

In the rejection, the Examiner alleges that **Bukhman** discloses a method that includes forming a process layer above a semiconductor substrate, etching at least a portion of the process layer, measuring a thickness of the wafer, and heating a plurality of portions of the wafer to a temperature determined by a heating profile map. The Examiner acknowledges that **Bukhman** does not disclose comparing the first depth to a desired depth. The Examiner then relies on **Bollinger** to teach comparing a measured thickness profile with a predetermined or desired thickness. The Examiner then concludes that it would be obvious to modify **Bukhman** with the teaching of **Bollinger** to compare a first depth to a desired depth since it would help determine whether or not to continue the etching process. Applicants respectfully disagree with this rejection as set forth by the Examiner.

**Bukhman** discloses a laser assisted plasma chemical etching method to differentially heat portions of a semiconductor substrate during downstream etching by generating a heating profile map. The differential heating of the semiconductor substrate provides a differential etch rate for each portion of the substrate heated, which results in improved uniformity and reduced etch induced surface damage to the substrate.

**Bollinger** teaches accelerating or decelerating a material removal tool based on determining whether a measured thickness profile of the substrate matches a desired profile.

**Bukhman** and **Bollinger**, when taken alone or in combination, fail to teach one or more of the claim elements, as discussed below. In particular, and as noted in the previous Response to Office Action, with respect to independent claims 1, 13, and 23, none of the cited references teaches “varying the temperature of a subsequently processed substrate in response to the first depth being different from the desired depth.” Specifically, the cited references, when considered alone or in combination, do not teach varying the temperature of a subsequently processed substrate. The Examiner relies on text from column 8, lines 40-50 of **Bukhman** to supposedly show this claim element. The cited text from **Bukhman** clearly specifies that the etching, measuring, calculating, and heating steps are performed on the wafer currently being processed (*i.e.*, until “said device wafer” is a predetermined thickness).

**Bollinger** also fails to teach or disclose the above claim element. That is, while **Bollinger** teaches accelerating or decelerating a material removal tool based on determining whether a measured thickness profile of the substrate matches a desired profile, it does not teach varying the temperature of a subsequently processed substrate.

The Examiner has not applied any other references that teach the above claimed element. The Applicants respectfully request that prior art be provided to substantiate this “obviousness”

assertion or that an **affidavit** be filed in accordance with **37 C.F.R. § 1.104(d)(2)**, which states (emphasis added):

(2) When a rejection in an application is based on facts **within the personal knowledge** of an employee of the Office, the data shall be as specific as possible, and the **reference must be supported, when called for by the applicant, by the affidavit of such employee**, and such affidavit shall be subject to contradiction or explanation by the affidavits of the applicant and other persons.

Consequently, the Applicants respectfully and seasonably request the Office to either (1) **cite a reference** in support of this position, or (2) **provide a Rule 104(d)(2) affidavit** from the Examiner supporting any **facts within the personal knowledge of the Examiner**, as also set forth in **M.P.E.P. § 2144.03**.

Arguments with respect to other dependent claims have been noted. However, in view of the aforementioned arguments, these arguments are moot and therefore not specifically addressed. To the extent that characterizations of the prior art references or Applicants' claimed subject matter are not specifically addressed, it is to be understood that Applicants do not acquiesce to such characterization.

In light of the arguments presented above, Applicants respectfully assert that claims 1-32 are allowable. In light of the arguments presented above, a Notice of Allowance is respectfully solicited.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Houston, Texas telephone

number (713) 934-4064 to discuss the steps necessary for placing the application in condition for allowance.

Respectfully submitted,



---

Date: May 29, 2003



23720

PATENT TRADEMARK OFFICE

---

Ruben S. Bains, Reg. No. 46,532  
WILLIAMS, MORGAN & AMERSON, P.C.  
10333 Richmond, Suite 1100  
Houston, Texas 77042  
(713) 934-7000  
(713) 934-7011 (facsimile)  
ATTORNEY FOR APPLICANTS